

# CMDHB GESTATIONAL DIABETES MELLITUS REGISTRY (GDMR) – Heading in the right direction?



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## Introduction

This poster updates progress on development of a Gestational Diabetes Mellitus (GDM) Registry in the Counties Manukau District Health Board area. GDM pregnancies have an increased risk of complications for both mother, and baby. For the baby risks include fetal macrosomia, operative deliveries, preterm birth, and neonatal hypoglycaemia. GDM also has implications for future pregnancies. Reports from a study done in the US found that a history of GDM made for 10 times the likelihood of developing GDM again.

There is a greater than seven-fold increase in the risk of later development of Type 2 Diabetes and a one in five chance of developing T2DM within five years after delivery. One NZ study found that 19% of 110 women with GDM had developed T2DM after a mean follow up of 2.4 years.

A clinical audit of the nearly 400 patients who attended the Diabetes in Pregnancy clinic at CMDHB in 2006 reported that nearly 80% of patients did not receive the recommended screening and by the end of a two year period nearly 40% still had not been tested. Early screening and followup is essential to improve the outcomes for these women and their offspring, and evidence suggests that prompts to physician and patient can lead to better compliance with screening recommendations.

## Objective:

Develop a pilot registry for CMDHB with extensibility to other areas.

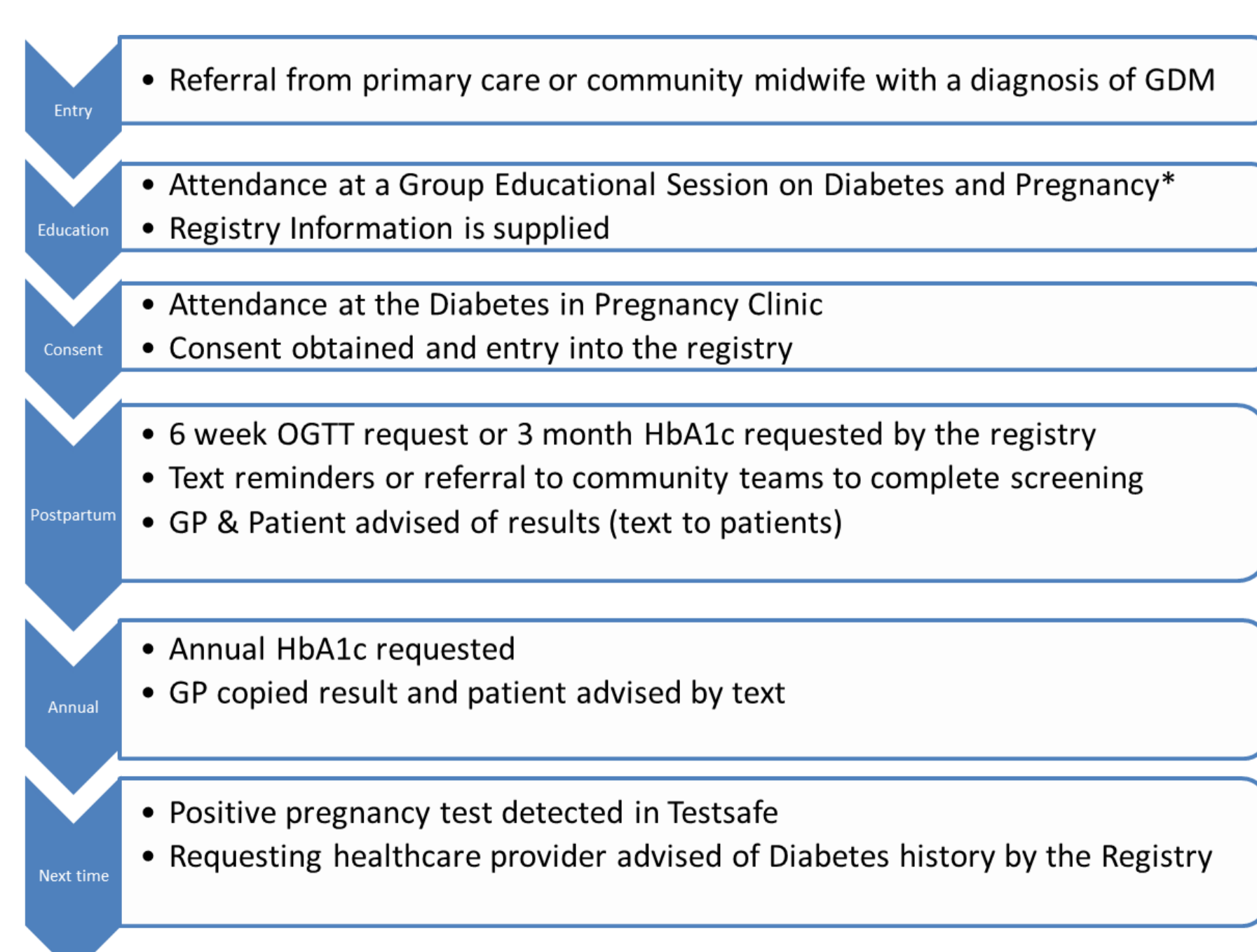
## Ultimate Aims of the GDM Registry

1. 100% successful screening of women, for diabetes within 3 months of a pregnancy complicated by gestational diabetes.
2. Annual screening of all women with previous diabetes in pregnancy for new onset type 2 diabetes mellitus.
3. An early warning to the healthcare provider for all women with a history of gestational diabetes in subsequent pregnancies who have a positive laboratory pregnancy test
4. Referral to relevant lifestyle education and resources.

## Dataset Domains

- Demographics
- Patient Contacts
- Providers
- ICD codes
- Case Management
- Laboratory data
- Clinical data
- Delivery data
- New born data
- Annual results
- Next pregnancies

## PATIENT JOURNEY



## Method

A web-based data set development tool was used to review & finalise the dataset domains and content by members of the development team. The registry uses International (and HISO) standard features:

- Consistent dataset
- Interoperability/integration
- Manage change over time

Processes were designed through discussion, consultation, reviewing existing structures.

Legislative and contract requirements were met including an Auckland regional privacy document developed in line with the Privacy Act 1993 and Health Information Privacy Code 1994 and accepted..

Development allows for future scalability and access to the regional laboratory results repository, "Test Safe".

The Registry is hosted within the University of Auckland's secure IT infrastructure that also manages other large national registries. This uses HISO Interoperability Reference Architecture (openEHR).

At sign off of the funder contract the development group moved to role to potentially oversee data

FUNDING for the next steps remains the priority

## Results

- Text message capacity exists to send reminder for screening, invitations to relevant health promotion/education activities.
- Subsequent pregnancies can be flagged with GP's as at risk for gestational diabetes and encourage early screening.
- Maori and Pacific health units have agreed to help ensure screening success using their community connections.
- Design and testing continues of associated interventions such as the Motivational Interviewing Group, Facebook support page.

## Conclusion

The development process has been complex with multiple parties involved. Different departments within the same organisation can require as much negotiation as entirely separate entities. The GDMR now has 70 women entered into it and potentially provides ease of access to an important set of information. It can allow tracking of compliance with screening and outcomes for women with a history of GDM, can give a longitudinal history of pregnancies and the potential subsequent development of diabetes. It is a valuable resource for future collaboration and can potentially be used to evaluate interventions to improve health outcomes in this area. Overall the registry has as the primary intention helping healthcare providers to improve health outcomes for mother and baby. After the successful conclusion of the pilot, further funding is required to automate processes, develop the capacity of software, cover costs of hosting and licencing, and manage the practical aspects of service delivery and data management.

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